

**IN THE UNITED STATES DISTRICT COURT
FOR EASTERN DISTRICT OF PENNSYLVANIA**

UNITED STATES OF AMERICA

v.

GONGDA XUE,

Defendant

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CRIMINAL NO. 2:18-CR-122 (JHS)

**DEFENDANT GONGDA XUE’S MEMORANDUM IN
SUPPORT OF HIS REQUEST FOR A NON-CUSTODIAL SENTENCE**

Defendant Gongda Xue (“Dr. Xue”), through undersigned counsel, respectfully submits this memorandum in aid of sentencing. The presentence report writer has concluded that the “loss” in this case, for purposes of the Federal Sentencing Guidelines, is zero. Given this conclusion, which of course we do not dispute, then Mr. Xue’s resulting Guidelines range likely would result in a non-custodial sentence, given the approximately ten months for which he was incarcerated following his extradition from Switzerland. Our understanding is that the government agrees with this conclusion and does not seek a custodial sentence.

In the alternative, a downward departure or variance is respectfully requested, but we doubt the Court would need to reach this issue for the reason stated above.

I. Introduction

A. Dr. Xue’s Early Life and Career

Dr. Xue was born near Beijing, China. Xue Tr. 4/26/22 at 62. His parents were MaoJie Xue and Zhifang Lei, who were both scientists. Dr. Xue has two younger sisters, Tian Xue and Yu Xue, who are also his alleged co-conspirators. Growing up, his parents emphasized the need for an education in the People’s Republic of China, as it was the only way to gain respect from

those around you. Dr. Xue received a B.S. in Biology from Henan University of Technology in China in 1992. Xue Tr. 4/26/22 at 66-67. He went on to receive an M.A. in Chinese Medicine from the China Academy of Chinese Medicine. Xue Tr. 4/26/22 at 69. Dr. Xue's father died of liver cancer in 1995, which encouraged Dr. Xue to pledge his life to studying cancer biology. Xue Tr. 4/26/22 at 69-70. After his father passed away, Dr. Xue remained in China to take care of his mother, postponing his education. Xue Tr. 4/26/22 at 70.

Dr. Xue received his Ph.D. from the University of Zurich in 2002 in biochemistry, remaining at the University of Zurich as a post-doctoral student. Xue Tr. 4/26/22 at 75-77, 83. He applied and was offered a position in a post-doctorate program at the National Institutes of Health ("NIH") in Bethesda, Maryland, focusing on HIV research. Xue Tr. 4/26/22 at 77. Due to the September 11th attack and subsequent visa issues, Dr. Xue remained in Switzerland, accepting a position at the University of Bern's Division of Molecular Pathology from 2004-2007. Xue Tr. 4/26/22 at 78, 83. Dr. Xue left the University of Bern in 2007 to begin working as a post-doctoral fellow at the University of Basel's Department of Physiology in Basel, Switzerland. Haugen Tr. 4/15/22 at 83.

While he was a post-doctoral fellow University of Basel, he met Dr. Brian Hemmings, a scientist who ran his own lab at the Friedrich Miescher Institute for Biomedical Research ("FMI") in Basel. Xue Tr. 4/26/22 at 88, 91. Dr. Hemmings wanted Dr. Xue to work in his lab, but Dr. Xue declined to join Dr. Hemmings' lab until his position ended at the University of Basel. Xue Tr. 4/26/22 at 91-92. Dr. Hemmings referenced this during his testimony as indicative of Dr. Xue's honorable character. Once his position at the University of Basel ended, he took a post-doctoral fellowship position in Dr. Hemmings' lab at the FMI. Xue Tr. 4/26/22 at 92. When Dr. Xue joined the lab, his contract was for one year, but upon satisfactory

performance, his contact could be extended for up to three years. Government's Exhibit 401, at 1; Haugen Tr. 4/15/22 at 65. Dr. Xue's contract was renewed a total of eight times, as he remained at the FMI until December 31, 2014, when Dr. Hemmings' lab closed. Government's Exhibit 401; Haugen Tr. 4/15/22 at 69; Xue Tr. 4/26/22 at 105.

While at FMI, Dr. Xue's research focused on three distinct areas. His research at FMI first focused on Twist, a transcription factor commonly found in cancer cells. Xue Tr. 4/26/22 at 94; Hemann Tr. 4/22/22 at 180. He and his colleagues in Dr. Hemmings' lab published a paper on Twist called "Akt PKB-mediated phosphorylation of Twist1 is Crucial for Breast Cancer Metastasis" in Cancer Discovery on January 25, 2012. Defendant's Exhibit 76. Dr. Xue, through FMI, also obtained a patent for his work on Twist prior to the publication, on September 10, 2010. Defendant's Exhibit 4.

Twist is what is known in the cancer research community as an "undruggable" target, so after this article was published, Dr. Xue turned his research attention to MerTK, a transmembrane protein. Hemann Tr. 4/22/22 at 181. After numerous attempts to publish an article relating to his research on MerTK, melanoma cells and inhibition beginning in March 2014, Dr. Xue and the Hemmings lab eventually published an article on their findings on May 25, 2017. Defendant's Exhibit 41; Xue Tr. 4/26/22 at 147. Although this article was published after Dr. Xue left FMI, the majority of the work for the publication had been done while he was at FMI. Xue Tr. 4/26/22 at 105-106. Dr. Xue also attempted to procure a patent for his work on MerTK. Government's Exhibit 711; Defendant's Exhibit 74; Xue Tr. 4/26/22 at 154.

After Dr. Xue's contract with FMI ended in 2014, he worked at the Basel Hospital for a year until he started his own company, ABBA Therapeutics ("ABBA"). Cron Tr. 4/25/22 at 195. Dr. Xue founded ABBA along with his FMI colleagues Dr. Reto Kohler and Mr. Peter Cron.

Cron Tr. 4/25/22 at 195, 198-99. Dr. Xue was the co-founder and CEO. Government's Exhibit 712, at 8. Mr. Cron was the chief communication officer and chief financial officer.

Government's Exhibit 712, at 8. ABBA's goal was to eventually create a drug against a form of metastatic skin cancer, melanoma. Government's Exhibit 712. This idea stemmed from Dr. Xue's research and patent on MerTK. ABBA obtained a small laboratory space in Basel to do some of their research, but they planned to use contract research organizations ("CROs") to do the majority of the drug development. Hemann Tr. 4/22/22 at 169; Cron Tr. 4/26/22 at 15-20. ABBA would oversee the work of those CROs. Cron Tr. 4/26/22 at 20. Importantly, ABBA contracted with a company that developed a rat with a humanized immune system, known as OmniRat. Cron Tr. 4/26/22 at 20. By using this novel transgenic rat technology, ABBA sought to bypass the entire otherwise necessary process of humanizing traditional rat antibodies, a typically long and complex process that is reflected in the GSK documents at issue in this case. Cron Tr. 4/26/22 at 20; Hemann Tr. 4/25/22 at 72-73. From its founding until approximately 2018, ABBA was able to obtain substantial funding to last through the pre-clinical stages of its testing. Cron Tr. 4/26/22 at 14. A letter from Mr. Cron is submitted as Exhibit A to this memorandum.

B. Dr. Xue's Family Life

In 1996, Dr. Xue married his wife, Li Zhuang. They had met at Henan University of Technology in 1989. Li Zhuang was a civil engineer when they lived in Beijing but has been a homemaker since she moved to Switzerland in 1999. Dr. Xue has not seen his wife in almost three years, since he was extradited to the United States, but they speak every day. Dr. Xue's son, Zitian Xue, is 23 years old and studies economics at the University of Basel. His son does

not know the details of the offenses in this case, but he and his father speak about once a week. Dr. Xue's wife and son have been anxiously waiting for him to return to Switzerland.

C. The Offense Conduct

Beginning in November 2010, Dr. Xue and his sister, Yu Xue, exchanged emails regarding his work at FMI. Dr. Xue sent his sister an email containing a manuscript for the later-published article entitled "Akt PKB-mediated phosphorylation of Twist1 is Crucial for Breast Cancer Metastasis," a research plan for the article, and a published article titled "Arginine containing peptides as delivery vectors." Government's Exhibit 100. Pursuant to Dr. Xue's employment contract with the FMI, he needed permission from the patent attorney, Nicolas Favre, before sending unpublished articles, including manuscripts from FMI, to third parties. Government's Exhibit 400. Dr. Xue submitted a clearance to Nicolas Favre, as well as the patent for this article, on September 10, 2010, two months before he sent this article to his sister. Defendant's Exhibit 42. Dr. Xue submitted his article to his sister because she was a scientist and he wanted her input and opinion on his article before submitting, a common practice within the academic scientific community. Xue Tr. 4/26/22 at 110-11; Villafranca Tr. 4/21/22 at 203; Hemann Tr. 4/22/22 at 162-63.

In a separate email, Yu Xue then asked Dr. Xue if he had any examples that use therapeutic antibody target transcription factors. Government's Exhibit 101. Dr. Xue responded with a list of different targets, which could be found in published articles prior to November 2010. Defendant's Exhibit 568. On December 20, 2010, Yu Xue copied the email that Dr. Xue sent to her and sent it to her colleagues at GSK, noting this information came from the literature. Government's Exhibit 102. On March 5, 2011, Dr. Xue sent an email attaching a PowerPoint titled "targets.ppt" to his sister. Government's Exhibit 105. This presentation was derived from

WHO and other such publications, complete with citations. Government's Exhibit 105. The following day, Yu Xue sent herself an email attaching a PowerPoint entitled "Proposed Novel Targets by Biopharm strategy" containing information similar to the PowerPoint Dr. Xue had sent her the day before. Government's Exhibit 106.

While Dr. Xue was working on his MerTK paper, he had an idea to study the interaction between MerTK and PD-L2 based on his review and understanding of the scientific literature. Defendant's Exhibit 13; Xue, Tr. 4/26/22 at 154-155. However, he had finding PD-L2 antibodies with which to conduct this experiment. Xue Tr. 4/26/22 at 155. In support of his own research, he asked his sister if she could send him PD-L1 and PD-L2 antibodies to FMI, where it was common to receive materials from other entities. Xue Tr. 4/26/22 at 156; Hemann Tr. 4/25/22 at 38; Cron Tr. 4/22/22 at 193. His sister sent Dr. Xue PD-1 and PD-L2 antibodies in September 2014. Government's Exhibit 113. While he was conducting the experiments on the PD-L2 antibodies, he wrote his sister an email on October 27, 2014. Government's Exhibit 116. He wrote that he would like to co-patent the antibodies, which is a common practice done in academia when you receive antibodies from another entity. Hemann, Tr. 4/25/22 at 45. He also wrote to his sister that he had two other people who would like to do this with him. Government's Exhibit 116. He asked: "can I say these antibodies are from your company (name???)? if some of them want to have a sample can I give them?" Government's Exhibit 116.

Dr. Xue conducted experiments on the interaction between PD-L2 and MerTK for his publication. Hemann Tr. 4/25/22 at 47; Cron Tr. 4/25/22 at 192; Xue Tr. 4/26/22 at 154-55. He drafted a declaration by which he explained the results of his experiments. Government's Exhibit 120. He described what he received and what he processed. *Id.*, Xue, Tr. 4/26/22 at 162.

He left intact and sent back the PD-1 mAbs because he did not request them. Xue Tr. 4/26/22 at 159. His declaration describes the experiments done for preliminary characterization of the antibodies. Government's Exhibit 120.

Dr. Xue knew Dr. Hemmings' lab would close in 2014 because of Dr. Hemmings' retirement. Cron Tr. 4/25/22 at 191. Starting around 2013, Dr. Xue began looking for other positions. Xue Tr. 4/26/22 at 147. He knew his sister, Yu Xue, worked at GSK and asked her help in seeking out a job at a biopharmaceutical company. Xue Tr. 4/26/22 at 147-48. After talking to a post-doctoral fellow at Novartis, Dr. Xue asked his sister to send him a set of reading materials about antibody expression, characterization, and bioreactor production. Government's Exhibit 106. Dr. Xue was seeking general information that might be helpful for finding a job in industry. Instead, Yu Xue sent him documents TL-5 and Z, neither of which corresponded to his request. Document Z was titled "Structure, Computation, and Biopharmaceuticals" and Document TL-5 was titled "Structure, Computation, and protein therapeutics." Government's Exhibits 212 and 213. Document Z described GSK's procedures for developing and humanizing a monoclonal antibody, including models and descriptions of specific GSK antibody candidates targeting Her3 receptors. Indictment, at 14. Document TL-5 summarized how structural characterization and molecular modeling contribute to the development of protein therapeutics at GSK. Indictment, at 21.

On February 20, 2014, Dr. Xue forwarded his sister a job description from Novartis. Government's Exhibit 110. A few days later on February 23, 2014, Yu Xue responded to Dr. Xue's email with an attachment to an audio recording titled: "Career Choice: Differences between Scientists in Academia and the Business World." Government's Exhibit 111. A few weeks later on March 3, 2014, without any prompting from Dr. Xue, Yu Xue sent him

Documents U, W, X-1 – X-7. Government’s Exhibits 122-125, 201-211. Dr. Xue never showed anyone these documents. Xue Tr. 4/26/22 at 143; Cron Tr. 4/26/22 at 22.

Much of the information contained within these documents was publicly available at the time Dr. Xue received the documents. During the course of the trial, both the Government’s and the defense’s experts described information in the GSK documents that contained information reflected in patents or was otherwise referenced in the literature at the time Dr. Xue received the GSK documents. Much of the clinical data referenced in the GSK documents was found in publicly available sources and did not prevent GSK from continuing to use these methods in the company’s work. Edwards Tr. 4/29/22 at 23-28; Defendant’s Exhibits 401, 411-20, 423, 424, 569.

Dr. Xue did not disseminate the GSK documents to FMI or otherwise. He did not share them with Peter Cron or Reto Kohler at ABBA Therapeutics, and did not work on any of the drugs referenced in the GSK documents while at FMI or at ABBA Therapeutics. ABBA Therapeutics outsourced its research projects. The companies ABBA contracted with, including OmniRat and Harbour Antibodies B.V., used their own formulas and protocols that were distinct from those described in the GSK documents. Government Exhibits 715 and 716. Accordingly, no GSK information was ever used in ABBA’s research.

D. The Guidelines

At the outset of sentencing, the Court is to determine the applicable Federal Sentencing Guidelines range. *See Molina-Martinez v. United States*, 136 S. Ct. 1338, 1342 (2016).

Although the Guidelines were once mandatory, following *United States v. Booker*, 543 U.S. 220 (2005), the Guidelines no longer carry the force of law, federal judges are no longer bound to strictly apply them, and “[a] district court may not presume that a Guidelines sentence is

reasonable.” *United States v. Cavera*, 550 F.3d 180, 189 (2d Cir. 2008) (en banc). Accordingly, the Court has discretion to vary from the Guideline range, so long as the resulting sentence is reasonable and justified. *See United States v. Jimenez-Beltre*, 440 F.3d 514, 518 (1st Cir. 2006) (en banc) (“Booker’s remedial solution makes it possible for courts to impose non-guideline sentences that override the guidelines, subject only to the ultimate requirement of reasonableness.”), *abrogated on other grounds by Rita v. United States*, 551 U.S. 338 (2007); *see also Koon v. United States*, 518 U.S. 81, 96–97 (1996) (a district court is vested with broad discretion to depart from the Guidelines); USSG § 5K2.0 (2018).

The Guidelines are now but a “starting point and initial benchmark” for sentencing. *Gall v. United States*, 552 U.S. 38, 39 (2007). After calculating the Guidelines range, the Court is to “make an individualized assessment based on the facts presented” by the parties. *Id.* Following *Booker*, sentencing involves two steps — first, calculating the Guideline range, and second, considering the § 3553(a) factors to determine a reasonable sentence. *See United States v. Talley*, 431 F.3d 784, 786 (11th Cir. 2005), *abrogated on other grounds by Rita*, 551 U.S. at 338. Just as the Court has discretion to impose a non-Guidelines sentence, “the weight to be afforded any § 3553(a) factor is a matter firmly committed to the discretion of the sentencing judge.” *United States v. Verkhoglyad*, 516 F.3d 122, 131 (2d Cir. 2008) (quotation marks omitted).

Furthermore, the Court has discretion to decide whether any § 3553(a) factor justifies a downward variance. *See Gall*, 552 U.S. at 51. When imposing a sentence outside the Guidelines range, the Court applies a non-mathematical formula with individualized assessments based on facts presented by the parties. *Id.* at 47, 50. The Court is guided by the fact that the ultimate sentence should be “not greater than necessary to accomplish the sentencing goals advanced in § 3553(a)(2).” *Kimbrough v. United States*, 552 U.S. 85, 111 (2007) (quotation marks omitted).

Dr. Xue has never before been accused of criminal wrongdoing. As a result of his conviction, Dr. Xue's company, ABBA Therapeutics, has lost its funding. He will have a difficult time reestablishing himself in the scientific community in Switzerland. Dr. Xue no longer has close connections with individuals who work at large pharmaceutical companies. There is no cognizable risk that he would reoffend. His life has been forever altered by his extradition and conviction. Further incarcerating Dr. Xue would serve no societal purpose. Dr. Xue has fully complied with his supervised release. This same level of compliance is to be expected if Dr. Xue were given probation. He will fully and faithfully comply with any requirements imposed by the Court.

Following the indictment in this Court, Dr. Xue remained in Swiss custody for 37 days in 2019. Dr. Xue was extradited from Switzerland on December 23, 2019. After several attempts to achieve pretrial release and an interlocutory appeal to the Third Circuit, Dr. Xue was released from pretrial detention on August 25, 2020. In total, Dr. Xue spent 303 days, or approximately 10 months, in custody. This far exceeds the sentence of any other co-conspirators in this action, all of who engaged in conduct far more egregious than that in Dr. Xue's case.

Even after his release from pretrial detention, from August 25, 2020 until the present, Dr. Xue has remained in home incarceration in a rented apartment in Chester County that was inspected and approved by Pretrial Services. His brother-in-law, Yudong Liu, provides Dr. Xue with food and transportation. He is only able to leave this apartment to attend medical appointments and meetings related to this case.

ABBA Therapeutics continued to pay Dr. Xue a limited monthly salary until the beginning of 2022, when it could no longer afford to do so. Due to Dr. Xue's conviction, it will be very difficult if not impossible for him to recoup the investors and funds ABBA has lost in the

past three years. Even if in the future ABBA regains its standing, Dr. Xue has lost almost three years of research and funding.

Additionally, Dr. Xue has also experienced personal losses. He has not seen his wife and son in two and a half years. Although he sees his brother-in-law regularly, he has a strained relationship with his sisters due to this matter. He has also been unable to visit his mother in China while he has been in the United States.

In *United States v. Smith*, No. 1:06-CR-00394, 2009 WL 249714 (N.D. Ohio Feb. 2, 2009), the court observed that community service would put the defendant's skills as an accountant and lawyer to better use than prison and that the defendant's "abilities . . . would otherwise be wasted during a more lengthy prison term." *Id.* at *4. Other courts have agreed with this rationale. *See, e.g., United States v. Warner*, 792 F.3d 847, 854 (7th Cir. 2015) (affirming sentence of two years of probation despite Guidelines range of 46–57 months where district court found that "society will be best served by allowing [the defendant] to continue his good works outside of prison") (internal quotations omitted); *United States v. Coughlin*, No. 06-CR-20005, 2008 WL 313099, at *7 (W.D. Ark. Feb. 1, 2008) (imposing a sentence of home confinement, five years of probation, and 1,500 hours of community service to company executive despite Guidelines range of 27–33 months in part because his "expertise is better put to use than wasted in the physical deterioration of unnecessary imprisonment"). Judge Analisa Torres sentenced Dr. Alexander Neumeister, a prominent neurological researcher at Yale and New York University ("NYU"), who pleaded guilty to stealing from NYU and various grant programs from 2012–2014, to three years' probation and to play the piano for an hour at least twice a week for three years for elderly group facilities after being alerted to Mr. Neumeister's

background as a trained pianist in the pre-sentence investigation report. See Tr. at 29–30, *United States v. Neumeister*, No. 18-cr-385 (AT) (S.D.N.Y. Nov. 7, 2018), ECF No. 42.

A non-custodial sentence is in the public’s best interest. Dr. Xue would benefit society by teaching, if he could find such employment.

Additionally, when determining the types of sentences available, the Court should consider the COVID-19 pandemic that has ravaged not just the nation, but, also, in particular, the prison system. Courts nationwide have already recognized the grave danger to prisoners, posed by COVID-19, noting that the risk “is significantly higher than in the community, both in terms of risk of transmission, exposure, and harm to individuals who become infected.” *Basank v. Decker*, 449 F. Supp. 3d 205, 211 (S.D.N.Y. 2020); see also *United States v. Campagna*, 16-cr. 78-01 (CGS), 2020 WL 1489829, at *2 (S.D.N.Y. Mar. 27, 2020); *United States v. Garlock*, No. 18-cr-00418-VC-1, 2020 WL 1439980, at *1 (N.D. Cal. Mar. 25, 2020).

For all of these reasons, it is submitted that a non-custodial sentence would be appropriate in this case, and such a sentence is respectfully requested.

Respectfully Submitted,

/s/ Barry Coburn

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 11, 2022 a copy of this memorandum was filed with the Clerk of the Court using the CM/ECF system and served on all counsel of record.

/s/
Barry Coburn